6712-01

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 95

[GN Docket No. 12-354; FCC 12-148]

Commercial Operations in the 3550-3650 MHz Band

AGENCY: Federal Communications Commission

ACTION: Proposed rule.

SUMMARY: In this document, the Commission proposes to create a new Citizens Broadband Radio Service under part 95 of its rules for shared small cell use in the 3550-3650 MHz band (3.5 GHz Band). The Commission seeks comment on other techniques that could be used to manage access within the 3.5 GHz band as well as protections for incumbent Department of Defense (DoD) and Fixed Satellite Service (FSS) users. The Commission also seeks comment on how the unique characteristics of small cells may help reduce the need for geographic protections and enable shared access of the 3.5 GHz Band across the widest possible geographic footprint. In addition, the Commission offers a supplemental proposal to integrate the 3650-3700 MHz band within the proposed Citizens Broadband Service, thereby encompassing an additional 50 megahertz of contiguous spectrum. This approach would leverage the benefits of small cell technology to enable widespread broadband access to the 3.5 GHz Band while minimizing the possibility of harmful interference to incumbent DoD and FSS users.

DATES: Submit comments on or before **February 20, 2013** and reply comments on or before **March 22, 2013**.

ADDRESSES: You may submit comments, identified by GN Docket No. 12-354, by any of the following methods:

- Federal Communications Commission's Web Site: http://fjallfoss.fcc.gov/ecfs2/. Follow the instructions for submitting comments.
- Mail: All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building. Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743. U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.
- People with Disabilities: Contact the FCC to request reasonable accommodations (accessible format documents, sign language interpreters, CART, etc.) by e-mail: FCC504@fcc.gov or phone: 202-418-0530 or TTY: 202-418-0432.

For detailed instructions for submitting comments and additional information on the rulemaking process, see the SUPPLEMENTARY INFORMATION section of this document.

FOR FURTHER INFORMATION CONTACT: Paul Powell, Attorney Advisor, Wireless Bureau's Mobility Division, at (202) 744-3597 or Paul.Powell@fcc.gov.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Notice of Proposed Rulemaking and Order (NPRM), in GN Docket No. 12-354, FCC 12-148, adopted and released December 12, 2012. The full text of this document is available for inspection and copying during normal business hours in the FCC Reference Center, 445 12th Street, SW., Washington, DC 20554. The complete text may be purchased from the Commission's copy contractor, Best Copy and Printing, Inc., 445 12th Street, SW., Room CY-B402, Washington, DC

20554, (202)488-5300, facsimile (202) 488-5563, or via email at fcc@bcpiweb.com. The full text may also be downloaded at: www.fcc.gov. Alternative formats are available to persons with disabilities by sending an e-mail to fcc504@fcc.gov or by calling the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

Synopsis of the NPRM

I. INTRODUCTION

1. With this NPRM, the Federal Communications Commission (Commission) propose to create a new Citizens Broadband Service in the 3550-3650 MHz band (3.5 GHz Band) currently utilized for military and satellite operations, which will promote two major advances that enable more efficient use of radio spectrum: small cells and spectrum sharing. The 3.5 GHz Band was identified by the National Telecommunications and Information Administration (NTIA) for shared federal and non-federal use in the 2010 Fast Track Report. See NTIA, An Assessment of the Near-Term Viability of Accommodating Wireless Broadband Systems et al, at http://www.ntia.doc.gov/files/ntia/publications/fasttrackevaluation_11152010.pdf. Our proposal builds on our experience with spectrum sharing in the television white spaces (TVWS), proposes ideas teed up in our recent Notice of Inquiry on Dynamic Spectrum Access technologies, and broadly reflects recommendations made in a recent report by the President's Council of Advisors on Science and Technology (PCAST). See PCAST, Report to the President: Realizing the Full Potential of Government-Held Spectrum to Spur Economic Growth at http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast_spectrum_report_final_july_20_2012.pdf. We also seek comment on whether to include under these proposed new, flexible rules the neighboring 3650-3700 MHz band, which is already used for commercial broadband

services. Together, these proposals would make up to 150 megahertz of contiguous spectrum available for innovative mobile and fixed wireless broadband services without displacing mission-critical incumbent systems.

2. Demand for wireless broadband capacity is growing much faster than the availability of new spectrum. While the Commission and the President have outlined a path for nearly doubling the amount of available spectrum for fixed and wireless broadband uses, some experts forecast a need for a thousand-fold increase in wireless capacity by 2020. To meet this demand, future generations of wireless technology and services must continue to increase their yield of bits per hertz per second. Future wireless traffic demands also require new wireless network architectures and new approaches to spectrum management.

3. The PCAST Report identifies two technological advances as holding great promise for increasing our nation's wireless broadband capabilities. First, increased use of small cell network deployments can multiply wireless capacity within existing spectrum resources. See PCAST Report at vi, 17-20. Second, increased spectrum sharing can make large swaths of otherwise "stovepiped" spectrum—nationwide bands set aside for important, but localized, government and non-government uses—newly available for broadband use. The proposed Citizens Broadband Service would foster the widespread utilization of both of these technological advances and promote the efficient use of the 3.5 GHz Band.

4. Small cells are low-powered wireless base stations intended to cover targeted indoor or localized outdoor areas ranging in size from homes and offices to stadiums, shopping malls, hospitals, and metropolitan outdoor spaces. Typically, they provide wireless connectivity in areas that present capacity and coverage challenges to traditional wide-area macrocell networks. Small cells can be deployed relatively easily and inexpensively by consumers,

enterprise users, and service providers. Networks that incorporate small cell technology can take advantage of greater "reuse" of scarce wireless frequencies, greatly increasing data capacity within the network footprint. For example, deploying ten small cells in a location in place of a single macro cell could result in a tenfold increase in capacity, using the same quantity of spectrum. Small cells can also be used to help fill in coverage gaps created by buildings, tower siting difficulties, and/or challenging terrain.

5. Spectrum sharing in this context refers to the use of automated techniques to facilitate the coexistence of disparate unaffiliated spectrum dependent systems that would conventionally require separate bands to avoid interference. Such coexistence may happen, for example, by authorizing targeted use of new commercial systems in specific geographical areas where interference into incumbent systems is not a problem. The need to minimize interference risks has caused, over time, much spectrum to be reserved for "high value" systems that protect national security, safety of life, etc. For example, the military may need spectrum for advanced radar systems or hospitals may deploy networks to enable real-time monitoring of patient vital signs. However, many of these uses are highly localized in nature. Therefore, more agile technologies and sharing mechanisms could potentially allow large quantities of special-purpose federal and non-federal spectrum to be used for more general purposes, such as commercial broadband services, on a shared basis.

6. The 3.5 GHz Band appears to be an ideal band in which to propose small cell deployments and shared spectrum use. The NTIA Fast Track Report identified the 3.5 GHz Band for potential shared federal and non-federal broadband use. Incumbent uses in the band include high powered Department of Defense (DoD) radars as well as non-federal Fixed Satellite Service (FSS) earth stations for receive-only, space-to-earth operations and feeder links. In the

adjacent band below 3550 MHz there are high-powered ground and airborne military radars. The Fast Track Report recommended, based on the commercial wireless broadband technology that was assessed, that new commercial uses of the band occur outside of large "exclusion zones." For this reason, and because of limited signal propagation at 3.5 GHz, the commercial wireless industry has expressed a viewpoint that the 3.5 GHz Band would not be particularly well-suited for macrocell deployment, with some suggesting that it might be more appropriate for fixed wireless or unlicensed use. We agree with the PCAST Report that the perceived disadvantages of the 3.5 GHz Band might be turned into advantages from the standpoint of promoting spectrum sharing and small cell innovation. Such a paradigm could vastly increase the usability of the band for wireless broadband.

7. We propose to structure the Citizens Broadband Service according to a multi-tiered shared access model that reflects the PCAST recommendation. We propose that the Citizens Broadband Service be managed by a spectrum access system (SAS) incorporating a dynamic database and, potentially, other interference mitigation techniques. The SAS would ensure that Citizens Broadband Service users operate only in areas where they would not cause harmful interference to incumbent users and could also help manage interference protection among different tiers of Citizens Broadband Service users. The three tiers of service would be: (1) Incumbent Access; (2) Priority Access; and (3) General Authorized Access (GAA). We seek comment on this approach. In addition, consistent with the Fast Track Report, we propose to protect existing federal systems operating in the 3.5 GHz Band and seek comment on appropriate allocation models to accomplish the goals set forth in this Notice.

8. We propose that the Incumbent Access tier would consist solely of authorized federal and grandfathered licensed FSS 3.5 GHz Band users. These Incumbent Access users

would be protected from harmful interference from Citizens Broadband Service users through appropriate regulatory and technical means. Citizens Broadband Service users would not be permitted to operate within geographically designated Incumbent Use Zones, which would encompass the geographic area where low-powered small cells could cause harmful interference to incumbent operations. We seek comment on whether the use of small cell technology incorporating lower power levels and other distinguishing technical characteristics compared to higher power cellular architecture systems could significantly reduce the exclusion zones proposed in NTIA's Fast Track Report. Outside of these zones, the SAS would manage Citizens Broadband Service access and would ensure that lower tiered users would not operate in a manner that would cause harmful interference to federal and FSS users in the 3.5 GHz Band.

9. The Priority Access tier would consist of a portion of the 3.5 GHz Band designated for small cell use by certain critical, quality-of-service dependent users at specific, targeted locations. We seek comment on who these eligible users should be and suggest that they could include hospitals, utilities, state and local governments, and/or other users with a distinct need for reliable, prioritized access to broadband spectrum at specific, localized facilities. We expect that the availability of the Priority Access tier could bring the benefits of mass-market commercial scale to specialized uses and provide a new alternative to dedicated spectrum, which is in short supply. In order to prevent an expectation of quality of service in areas where such an expectation might not be warranted, Priority Access operations would only be permitted in geographic zones with no likelihood of harmful interference from Incumbent Access users and no expectation of harmful interference from Citizens Broadband Service users to Incumbent Access users. Priority Access users would be required to register in the SAS and

accorded protection from interference from lower tier users and other Priority Access users within their local facilities.

10. The General Authorized Access (GAA) tier would be assigned for use by the general public on an opportunistic, non-interfering basis within designated geographic areas. GAA users could include a wide range of residential, business, and others, including wireless telephone and Internet service providers. We propose to authorize GAA use in zones where small cell use would not interfere with incumbent operations. Unlike the Priority Access tier, we propose to allow GAA use in areas where some interference from incumbent operations might be expected. We also propose that GAA users be required to register in the SAS and comply with all applicable technical, regulatory, and enforcement rules to ensure that GAA users avoid causing harmful interference to Incumbent Access and Priority Access users and always accept harmful interference from such users. We also seek comment on whether federal entities could be authorized GAA users. We seek comment on what technologies could be used to enable effective GAA use of the 3.5 GHz Band.

11. Under our main proposal, users in the Priority Access and GAA tiers would be licensed by rule as Citizens Broadband Service users under part 95 of the Commission's rules. A license-by-rule approach would provide individuals, organizations, and service providers with "automatic" authorization to deploy small cell systems, in much the same way that our Part 15 unlicensed rules have allowed widespread deployment of Wi-Fi access points. In the present context, we believe licensing by rule provides two advantages compared to unlicensed authorization. First, as a licensed service, 3.5 GHz Band operations would enjoy greater interference protection status in the Table of Frequency Allocations consistent with the proposed multi-tiered approach. Second, licensing by rule might allow for a more unified authorization

framework for multiple tiers of users that otherwise might fall into different parts of the Commission's rules. We seek comment on whether the proposed framework could be implemented through other regulatory approaches, including through the part 15 unlicensed rules or through geographic area licensing. We also seek comment on the benefits that could accrue to federal users through use of the Citizens Broadband Service.

12. We also offer a supplemental proposal to integrate the 3650-3700 MHz band within the proposed Citizens Broadband Service, thereby encompassing an additional 50 megahertz of contiguous spectrum. The Commission currently licenses the 3650-3700 MHz band on a non-exclusive basis, with protections for incumbent FSS operations. The 3650-3700 MHz band is used extensively by wireless Internet service providers, among others, to provide commercial broadband service. Expanding the Citizens Broadband Service to include this band could bring benefits of greater spectrum availability and equipment scale economies to current 3650-3700 MHz licensees. Under our proposal, the SAS would authorize existing licensees as GAA users in the larger, combined band, and would authorize higher power levels in less congested areas, provided there is no risk of harmful interference to Incumbent Access or Priority Access operations. This proposal contemplates conversion of the existing non-exclusive licensing framework to the license-by-rule framework proposed herein. We also note that the 3650-3700 MHz band is currently allocated on a primary basis to the federal radiolocation service in three locations. We seek comment on the potential impact of these proposed changes in the use of the 3650-3700 MHz band on these and other incumbent operations.

13. If implemented, the new Citizens Broadband Service could help address the ongoing capacity shortage and promote new innovations in broadband technology, deployment, and spectrum management while protecting incumbent authorized federal and grandfathered FSS

users. In order to develop a comprehensive record on this proposal, we seek comment on a wide range of technical, licensing, and other related issues. To that end, we seek comment on: (1) appropriate licensing schemes; (2) specific flexible and resilient interference mitigation technologies and techniques that could be implemented by Citizens Broadband Service users; (3) appropriate deployment strategies for Citizens Broadband Service devices; and (4) the SAS dynamic database that is envisioned to manage access to and use of the 3.5 GHz Band. To ensure the development of a comprehensive record, we may release additional notices, analyses, or white papers for comment during the course of this proceeding. Moreover, because this proceeding raises significant novel technical issues with respect to sharing with federal users, we expect to work closely with NTIA and relevant federal agencies to perform necessary further analysis, and we encourage commenters to provide relevant technical input to inform this analysis, where appropriate.

14. Freeze on New Earth Stations. To preserve the stability of the spectral environment in the 3.5 GHz Band and ensure that opportunities continue to exist for wireless broadband services as proposed in the foregoing Notice, we direct the International Bureau to stop accepting applications in the 3600-3650 MHz band for new earth stations in the fixed-satellite service that are more than 10 statute miles from a licensed earth station's coordinates for the duration of this proceeding. This application freeze is narrowly tailored to ensure a stable spectral ecosystem for the proposed Citizens Broadband Service, while providing reasonable opportunities to obtain suitable real estate for the placement of new FSS earth station facilities near grandfathered earth stations. In light of the limited number of such grandfathered stations, such a freeze is expected to meet the immediate needs of earth station operators without

significantly reducing the availability of spectrum for wireless broadband services by prohibiting expansion of new FSS earth stations in the 3600-3650 MHz band segment.

15. The decision to impose this freeze is procedural in nature, and therefore the freeze is not subject to the notice and comment requirements of the Administrative Procedure Act. Moreover, for the reasons set forth above, in these circumstances there is good cause to find that notice and comment are impractical, unnecessary, and contrary to the public interest because it would undercut the purposes of the freeze. For the same reasons, and in order to avoid undercutting the purposes of the freeze, we find that there is good cause for making the freeze effective as of the release date of this NPRM.

II. PROCEDURAL MATTERS

A. Ex Parte Rules

16. The proceeding this NPRM initiates shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's ex parte rules. Persons making ex parte presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral ex parte presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the ex parte presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can

be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during ex parte meetings are deemed to be written ex parte presentations and must be filed consistent with § 1.1206(b). In proceedings governed by § 1.49(f) or for which the Commission has made available a method of electronic filing, written ex parte presentations and memoranda summarizing oral ex parte presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's ex parte rules.

17. We exempt from the disclosure requirement under our ex parte rules all ex parte presentations made by NTIA or Department of Defense representatives. This NRPM raises significant technical issues implicating federal and non-federal spectrum allocations and users. Staff from NTIA, DoD, and the FCC have engaged in technical discussions in the development of this Notice, and we anticipate these discussions will continue after this NPRM is released. We believe that these discussions will benefit from an open exchange of information between agencies, and may involve sensitive information regarding the strategic federal use of the 3.5 GHz Band. Recognizing the value of federal agency collaboration on the technical issues raised in this Notice, NTIA's shared jurisdiction over the 3.5 GHz Band, the importance of protecting federal users in the 3.5 GHz Band from interference, and the goal of enabling spectrum sharing to help address the ongoing spectrum capacity crunch, we find that this exemption serves the public interest.

B. Filing Requirements

18. Pursuant to §§ 1.415 and 1.419 of the Commission's rules, interested parties may file comments and reply comments on or before the dates indicated on the first page of this

document. Comments may be filed using: (1) the Commission's Electronic Comment Filing System (ECFS), (2) the Federal Government's eRulemaking Portal, or (3) by filing paper copies.

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: http://www.fcc.gov/cgb/ecfs/ or the Federal eRulemaking Portal: http://www.regulations.gov.
- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

  Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

  - All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building. The filing hours are 8:00 a.m. to 7:00 p.m.
  - Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
  - U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

19. Comments, reply comments, and ex parte submissions will be available for public inspection during regular business hours in the FCC Reference Center, Federal Communications Commission, 445 12th Street, S.W., CY-A257, Washington, D.C., 20554. These documents will also be available via ECFS. Documents will be available electronically in ASCII, Microsoft Word, and/or Adobe Acrobat.

20. To request information in accessible formats (Braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the FCC's Consumer and Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (TTY). This document can also be downloaded in Word and Portable Document Format (PDF) at: http://www.fcc.gov.

21. For additional information on this proceeding, please contact Paul Powell of the Wireless Telecommunications Bureau at (202) 418-1613 or Paul.Powell@fcc.gov.

C. Paperwork Reduction Act of 1995 Analysis:

22. This document contains proposed information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. Public and agency comments are due **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Comments should address: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection

techniques or other forms of information technology; and (e) way to further reduce the information collection burden on small business concerns with fewer than 25 employees. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. 3506(c)(4), we seek specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.

23. In addition to filing comments with the Secretary, a copy of any comments on the Paperwork Reduction Act information collection requirements contained herein should be submitted to the Federal Communications Commission via email to PRA@fcc.gov and to Nicholas A. Fraser, Office of Management and Budget, via email to Nicholas_A._Fraser@omb.eop.gov or via fax at 202-395-5167.

D. Initial Regulatory Flexibility Analysis

24. As required by the Regulatory Flexibility Act of 1980 (RFA), the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) relating to the foregoing Notice. Written public comments are requested on the IRFA. These comments must be filed in accordance with the same filing deadlines as comments filed in response to this NPRM as set forth on the first page of this document and have a separate and distinct heading designating them as responses to the IRFA.

1. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

25. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted. See 5 U.S.C. 603(b)(3). The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental

jurisdiction." See 5 U.S.C. 601(6). In addition, the term "small business" has the same meaning as the term "small-business concern" under the Small Business Act. See 5 U.S.C. 601(3). A small-business concern" is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA. See 15 U.S.C. 632.

26. In the following paragraphs, the Commission further describes and estimates the number and type of small entities that may be affected by the proposals set forth in the Notice. However, since the 3.5 GHz Band is not currently used by small businesses for terrestrial broadband, the proposed new service is unlikely to impose significant new burdens on small businesses. However, if our proposals were adopted, small businesses that choose to use the Citizens Broadband Service on a Priority Access or GAA basis would most likely be required to comply with new registration and compliance requirements, including registration in the SAS. In addition, any device manufacturers that choose to manufacture devices for use in the 3.5 GHz Band will have to ensure that such devices comply with any rules adopted in this proceeding. Finally, if our supplemental proposal to incorporate the 3650-3700 MHz band into the proposed Citizens Broadband Service is adopted, these new rules will apply to any small businesses currently licensed to operate in the 3650-3700 MHz band.

27. Small Businesses, Small Organizations, and Small Governmental Jurisdictions. The proposals set forth in the Notice, may, over time, affect small entities that are not easily categorized at present. We therefore describe here, at the outset, three comprehensive, statutory small entity size standards that encompass entities that could be directly affected by the proposals under consideration. As of 2009, small businesses represented 99.9% of the 27.5 million businesses in the United States, according to the SBA. Additionally, a "small

organization" is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field." Nationwide, as of 2007, there were approximately 1,621,315 small organizations. Finally, the term "small governmental jurisdiction" is defined generally as "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand." Census Bureau data for 2007 indicate that there were 89,527 governmental jurisdictions in the United States. We estimate that, of this total, as many as 88,761 entities may qualify as "small governmental jurisdictions." Thus, we estimate that most governmental jurisdictions are small.

28. Wireless Telecommunications Carriers (except Satellite). This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular phone services, paging services, wireless Internet access, and wireless video services. The appropriate size standard under SBA rules is for the category Wireless Telecommunications Carriers (except satellite). The size standard for that category is that a business is small if it has 1,500 or fewer employees. For this category, census data for 2007 show that there were 1,383 firms that operated for the entire year. Of this total, 1,368 firms had 999 or fewer employees and 15 had 1000 employees or more. Thus, under this category and the associated small business size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small entities that may be affected by our proposed action.

29. Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing. The Census Bureau defines this category as follows: "This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless

communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment." The SBA has developed a small business size standard for firms in this category, which is: all such firms having 750 or fewer employees. According to Census Bureau data for 2002, there were a total of 1,041 establishments in this category that operated for the entire year. Of this total, 1,010 had employment of under 500, and an additional 13 had employment of 500 to 999. Thus, under this size standard, the majority of firms can be considered small.

30. 3650-3700 MHz Band Licensees. In March 2005, the Commission released an order providing for the nationwide, non-exclusive licensing of terrestrial operations, utilizing contention-based technologies, in the 3650 MHz band (i.e., 3650–3700 MHz). As of April 2010, more than 1270 licenses have been granted and more than 7433 sites have been registered. The Commission has not developed a definition of small entities applicable to 3650–3700 MHz band nationwide, non-exclusive licensees. However, we estimate that the majority of these licensees are Internet Access Service Providers (ISPs) and that most of those licensees are small businesses.

2. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

31. Under the Commission's proposal, all Citizens Broadband Service devices must comply with technical and operational requirements aimed at preventing interference to Incumbent Access and Priority Access users, including: complying with technical parameters (e.g., power and unwanted emission limits) as well as RF exposure requirements for the type of

device; and incorporation of geo-location capabilities. Citizens Broadband Service users would be required to register such devices in the SAS.

32. In addition, if our supplemental proposal to incorporate the 3650-3700 MHz band into the proposed Citizens Broadband Service is adopted, small businesses operating in this band will be required to transition from the current non-exclusive nationwide licensing approach to the Citizens Broadband Service license-by-rule approach. This will likely entail additional costs and administrative burdens. In the NPRM, we seek comment on the extent of any such potential burdens.

33. While our proposals would require small businesses to register in the SAS and comply with the rules established for the Citizens Broadband Service, they would receive the ability to access spectrum that is currently unavailable to them. On balance, this would constitute a significant benefit for small business.

3. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered

34. The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): "(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance, rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities." See 5 U.S.C. 603(c)(1) – (c)(4).

35. In the NPRM, the Commission proposes that all Citizens Broadband Service users register in the SAS which will manage interference between different tiers of users. The NPRM specifically invites comments on a range of potential technical, legal, and policy aspects of its proposal, including equipment authorization requirements and the specific mechanics of the SAS. At this time, the Commission has not excluded any alternative proposal concerning the operation of the Citizens Broadband Service from its consideration, but it would do so in this proceeding if the record indicates that a particular proposal would have a significant and unjustifiable adverse economic impact on small entities. The Commission also solicits alternative licensing proposals, especially those that would not incur significant and unjustifiable adverse impacts on small entities.

36. With regard to the supplemental proposal to include the 3650-3700 MHz band, we seek comment on the costs and benefits of extending the Citizens Broadband Service to this band. We also specifically seek comment on the projected cost to existing 3650-3700 MHz licensees and the amount of time it would take such licensees to transition to the new proposed licensing regime.

4. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules

37. None.

E. Congressional Review Act

38. The Commission will not send a copy of the foregoing Order pursuant to the Congressional Review Act, see 5 U.S.C. 801(a)(1)(A), because the application freeze implemented in such Order is a rule of agency organization, procedure, or practice that does not substantially affect the rights or obligations of non-agency parties. Id. at 804(3)(C).

III. ORDERING CLAUSES

39. Pursuant to sections 1, 2, 4(i), 4(j), 7, 301, 302(a), 303, 307(e), and 316 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 152, 154(i), 154(j), 157, 301, 302(a), 303, 307(e), and 316, this NPRM and Order in GN Docket No. 12-148 is adopted.

40. License applications for new earth stations in the fixed satellite service, which would receive on frequencies in the 3600-3650 MHz band on a primary basis, filed on or after December 12, 2012, shall not be accepted unless frequencies in this same band are currently licensed to an earth station within 10 miles of the requested coordinates.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch,
Secretary.

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